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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/719,813
Filing Date: November 21, 2003
Appellant(s): TERMONIA ET AL.

MAILED
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GROUP 1700

Christina Geerlof
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/17/2007 appealing from the Office action mailed 10/13/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct. Each independent claim limitation is precisely found at the provided citations.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

JP 11-158733	ARANAGA	6-1999
4,038,452	KOBAYASHI	7-1977

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
2. Claims 1-3, 6-8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 11-158733 to Aranaga in view of USPN 4,038,452 to Kobayashi.

Regarding claim 1-3, 6-8 and 10-11, Aranaga discloses a non-woven fabric comprising a plurality of entangled helically crimped asymmetric bicomponent fibers comprising a first crystallizable polyester component (poly(ethylene terephthalate) and a second crystallizable polyester component (poly(propylene terephthalate), said first crystallizable polyester component exhibiting a lower rate of crystallization than said second crystallizable polyester component, said fibers being characterized by a denier range of 0.5 to 6 denier (see entire document including Patent Abstract and claim 2).

Aranaga is silent with regards to the orientation of the fibers, the number of crimps per inch, the crimp radius of curvature, and the bulk density of the nonwoven fabric, therefore, it would have been necessary and thus obvious to look to the prior art for the conventional orientation of fibers, number of crimps per inch, crimp radius of curvature, and nonwoven fabric bulk density. Kobayashi provides this conventional teaching showing that it is known in the nonwoven crimp fiber art (column 1, lines 4-11) to orient the fibers in a well-defined plane (see Figure 1), to use fibers with 20 to 80 crimps per inch (column 2, lines 45-61), to use a radius of curvature of below 1.5 mm (column 2, line 45 through column 3, line 5), and to use a bulk

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density of between 0.05 to 0.25 g/cm³ (column 2, lines 9-19 and column 8, lines 35-38).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to orient the fibers of Aranaga in a well-defined plane, to use fibers with 20 to 80 crimps per inch (column 2, lines 45-61), to use a radius of curvature of below 1.5 mm (column 2, line 45 through column 3, line 5), and to use a bulk density of between 0.05 to 0.25 g/cm³, motivated by the expectation of successfully practicing the invention of Aranaga.

Regarding claim 2 and 11, Aranaga discloses that the fibers may be side-by-side fibers (Patent Abstract).

Regarding claims 3, 7-8 and 11, Aranaga discloses that the first crystallizable polyester component may be (poly(ethylene terephthalate) and that the second crystallizable polyester component may be (poly(propylene terephthalate) (Patent Abstract).

Regarding claims 6-8 and 11, Aranaga discloses that the fibers may be staple fibers (Patent Abstract).

Regarding claims 7-8 and 11, Aranaga discloses that the concentration ratio may be in the range of 70:30 to 30:70 (Patent Abstract). Aranaga specifically mentions a concentration ratio in the range of 60:40 to 40:60 (see Detailed Description).

Regarding claims 10 and 11, Aranaga does not specifically mention the Young's modulus or the ultimate stretch, but considering that the nonwoven fabric taught by the applied prior art is substantially identical to the claimed nonwoven (same side-by-side bicomponent fibers, same fiber density, same number of crimps per inch, same crimp radius of curvature, and same bulk density), it appears that the nonwoven fabric inherently possesses the claimed Young's modulus and ultimate stretch.

The Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977).

Regarding claim 11, Aranaga discloses that the fibers may have an uncrimped length in the range of 2 to 100 mm (Patent Abstract).

(10) Response to Argument

The appellant asserts that Kobayashi fails to teach or suggest the claimed fabric bulk density or the claimed fibers preponderantly oriented in a well-defined plane. The appellant also asserts that there is no motivation to combine the references and that the references are non-analogous. The examiner respectfully disagrees.

DENSITY

The appellant admits that Aranaga discloses the claimed polyester fibers and that Kobayashi discloses an acrylonitrile fabric bulk density range (0.05 to 0.25 g/cc) that overlaps the claimed bulk density range (0.2 to 0.4 g/cc), but the appellant asserts that the applied prior art fails to teach or suggest the claimed polyester fabric density because the fabric disclosed by

Kobayashi is an acrylonitrile fabric. The appellant asserts that since polyester has a higher density than acrylonitrile, more polyester fibers per volume (a greater density) would be necessary to obtain a fabric with the same fiber volume as that of Kobayashi. The examiner respectfully disagrees.

Firstly, appellant's argument is based on the false premise that one skilled in the art would not only desire, but would be required to use the fiber volume taught by Kobayashi rather than the fabric density disclosed by Kobayashi. This is contrary to the teachings of Kobayashi. Kobayashi specifically mentions a desired fabric density while never mentioning fiber volume. Kobayashi discloses that a specific fabric density is desired to obtain a specific fabric bulkiness and softness (column 2, lines 9-19). The appellant has failed to show, or attempt to show, that one skilled in the art is even remotely concerned about fiber volume. The examiner submits that appellant's argument is without merit because unsupported arguments are no substitute for objective evidence. *In re Pearson*, 494 F.2d 1399, 1405, 181 USPQ 641, 646 (CCPA 1974).

Secondly, even assuming *arguendo*, that one skilled in the art would be required to construct the fabric of Aranaga with the fiber volume taught by Kobayashi, Kobayashi still teaches the claimed fabric density. The density of the acrylonitrile fabric disclosed by Kobayashi is 0.05 to 0.25 g/cc (column 2, lines 9-19 and column 8, lines 35-38) and according to the appellant, acrylonitrile has a density of 0.81 g/cc. Therefore, Kobayashi discloses that the acrylonitrile fabric has a fiber volume of about 6% to 31% ($0.05/0.81$ to $0.25/0.81$).

According to the appellant, polyester has a density of 1.38 g/cc. Therefore, keeping the fiber volume the same as that disclosed by Kobayashi (6% to 31%), but substituting polyester in place of acrylonitrile, the resulting polyester fabric would have a density range of 0.08 to 0.43 g/cc (0.06×1.38 to 0.31×1.38). Therefore, even when adjusting the fabric density of Kobayashi to keep the fiber volume the same, Kobayashi still discloses a fabric density (0.08 to 0.43 g/cc) that overlaps the claimed fabric density (0.2 to 0.4 g/cc).

WELL-DEFINED PLANE

The appellant asserts that Kobayashi fails to teach or suggest fibers predominately oriented in a “well-defined plane” because Kobayashi allegedly does not control the thickness of the fabric. The examiner respectfully disagrees. Kobayashi clearly discloses that the fabric possesses “uniformity in surface density and flatness” (see Figure 1, column 5, lines 13-17, and column 8, lines 21-38). In addition, Kobayashi discloses that shrinkage must be at least 10% otherwise the resulting web possesses poor surface flatness (column 7, lines 65-68).

MOTIVATION TO COMBINE

The appellant asserts that no motivation exists to combine the references. The examiner respectfully disagrees. Aranaga is silent with regards to the orientation of the fibers, the number of crimps per inch, the crimp radius of curvature, and the bulk density of the nonwoven fabric, therefore, it would have been necessary and thus obvious to look to the prior art for the conventional orientation of fibers, number of crimps per inch, crimp radius of curvature, and nonwoven fabric bulk density. Kobayashi provides this conventional teaching showing that it is

known in the nonwoven crimp fiber art to orient the fibers in a well-defined plane, to use fibers with 20 to 80 crimps per inch, to use a radius of curvature of below 1.5 mm, and to use a bulk density of between 0.05 to 0.25 g/cm³. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to orient the fibers of Aranaga in a well-defined plane, to use fibers with 20 to 80 crimps per inch, to use a radius of curvature of below 1.5 mm, and to use a bulk density of between 0.05 to 0.25 g/cm³, motivated by the expectation of successfully practicing the invention of Aranaga and because it is within the general skill of a worker in the art to select said known characteristics on the basis of their suitability and desired characteristics. *In re Leshin, 125 USPQ 416.*

In response, the appellant asserts that this motivation is hindsight reconstruction. The examiner respectfully disagrees. The appellant appears to be asserting that one skilled in the art would not be motivated to successfully practice the invention of Aranaga, but the appellant has failed to show, or attempt to show, that one skilled in the art would not be motivated to successfully practice the invention of Aranaga. Appellant's argument is, once again, without merit because it is well settled that unsupported arguments are no substitute for objective evidence.

It is noted that the problem motivating the patentee may be only one of many addressed by the patent's subject matter. The question is not whether the combination was obvious to the patentee but whether the combination was obvious to a person with ordinary skill in the art. Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.

The appellant also asserts that a *prima facie* case of obviousness has not been established because Kobayashi discloses that any outer mechanical force that restricts dimensional change should not be given. The examiner respectfully disagrees. Although the current specification mentions the use of force to restrict expansion during the process of crimp development, the current claims do not require the use of said process. Regardless of the process used by the current appellant to make the currently claimed product, the applied prior art teaches the claimed product. It is noted that the appellant has failed to show, or attempt to show, that the product taught by the applied prior art is patentably distinct from the claimed product.

NONANALOGOUS ART

In response to appellant's argument that the applied prior art is nonanalogous art, it has been held that a prior art reference must either be in the field of appellant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the appellant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the current application, Aranaga, and Kobayashi, each relate to the nonwoven crimp staple fiber art.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Andrew T Piziali/

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